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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/541,172	06/30/2005	Arno Friedrichs	FRIEDRICHS A, 4 PCT	4544

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EXAMINER
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TOLAN, EDWARD THOMAS

ART UNIT	PAPER NUMBER
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3725

DATE MAILED: 06/29/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

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<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/541,172	FRIEDRICHS, ARNO	
	<b>Examiner</b>	<b>Art Unit</b>	
	Edward Tolan	3725	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 23-38 is/are pending in the application.  
     4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 23-38 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 June 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
     a) ☒ All    b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |                                                                                                                                              |                                                                                        |
|----------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                                                  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                                         | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)            |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>6-30-2005</u> | 6) <input type="checkbox"/> Other: ____                                                |

**DETAILED ACTION**

***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 23-38 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 23 recites the limitations "the first mass flow" in line 11 and "the required volume flows" in line 19. There is insufficient antecedent basis for these limitations in the claim.

Claim 24 recites the limitation "the first mass flow" in line 2. There is insufficient antecedent basis for this limitation in the claim.

Claim 25 recites the limitation "the first mass flow" in line 2. There is insufficient antecedent basis for this limitation in the claim.

Claim 26 recites the limitation "first mass flow" in line 2. There is insufficient antecedent basis for this limitation in the claim.

Claim 27 recites the limitation "the exit speed" in line 2. There is insufficient antecedent basis for this limitation in the claim.

Claim 28 recites the limitations "the first mass flow" in line 23 and "the front region" in line 5. There is insufficient antecedent basis for these limitations in the claim.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 23-28, 32-35 and 38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Puide et al. (6,450,739) in view of Asai (JP 1-309718). Puide discloses a method and apparatus for forming a hard metal tool comprising a first material (13) of a lower hardness and a second core material (12) of harder material. The first material (13) is provided within a first extrusion tool (52) and the second material (12) is provided in a second tool (51). The second material is fed through a channel (nozzle, 53) that forces the core material into a common plastic mass flow with the first material in a nozzle (54). The first and second materials are then forced through a die (29) that has a non-round nozzle shape portion (43). Regarding claims 32 and 38, the provision of additional material sources is a duplication of existing parts and would have been obvious to the skilled artisan in order to provide more than two materials. Puide does not disclose that a speed of a mass flow of the materials is controlled by a sensor. Asai teaches a speed sensor (15) and pressure detector (16) for a cylinder (9) and ram (5) of an extrusion press. It would have been obvious to one skilled in the art at the time of invention to provide the extrusion tools of Puide with speed sensing and

press control as taught by Asai in order to process a controlled amount of material at a controllable speed.

Claims 29,30,31,36 and 37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Puide et al. (6,450,739) in view of Riviere et al. (5,598,731). Puide discloses a method and apparatus for forming a hard metal tool comprising a first material (13) of a lower hardness and a second core material (12) of harder material. The first material (13) is provided within a first extrusion tool (52) and the second material (12) is provided in a second tool (51). The second material is fed through a channel (nozzle, 53) that forces the core material into a common plastic mass flow with the first material in a nozzle (54) The first and second materials are then forced through a die (29) that has a non-round nozzle shape portion (43). Puide does not disclose a valve. Riviere teaches outlet conduits (44,45) that have sealing means (46,47) that are valve means to influence flow rates into die chambers (10,10a). It would have been obvious to one skilled in the art at the time of invention to provide Puide with valve means as taught by Riviere in order to control a mass flow from the extrusion tooling. Regarding claim 31, it would have been obvious to the skilled artisan to control an opening amount of the valve means in order to force a specified amount or material into the combined mass flow.

### ***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Art Unit: 3725

Any inquiry concerning this communication should be directed to Ed Tolan whose telephone number is 571-272-4525. FAX communications should be sent to 571-273-8300.

ED TOLAN  
PRIMARY EXAMINER

A handwritten signature in black ink, appearing to read 'Ed Tolan', is written over the printed name and title.